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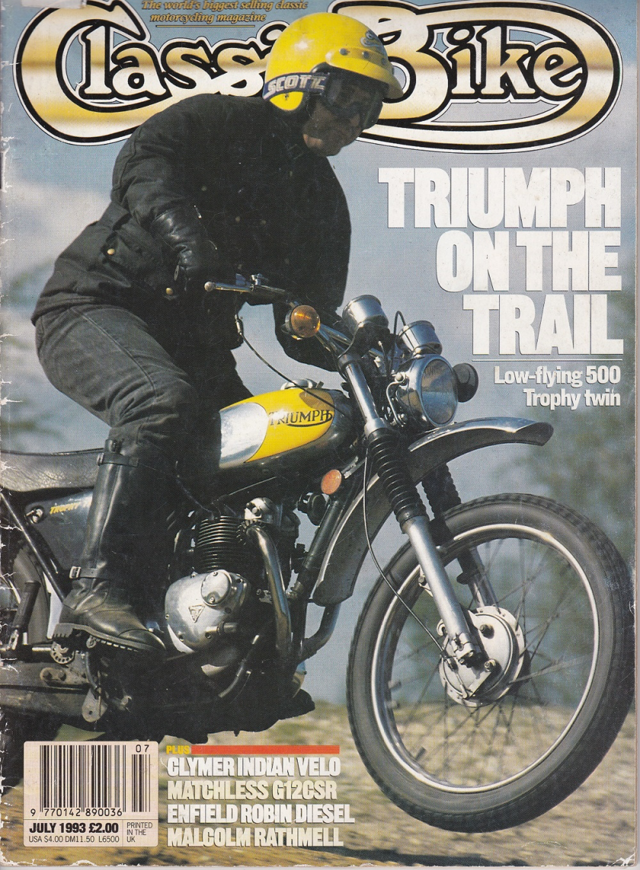

TRIUMPH ON THE TRAIL

Low-flying 500 Trophy twin

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A TRIUMPH ON THE TRAIL?

Triumph's 500cc Trophy Trail was sold as a dual purpose machine for road and trail. We put a 1973 model to the test on and off the tarmac

Mick Duckworth

Performance

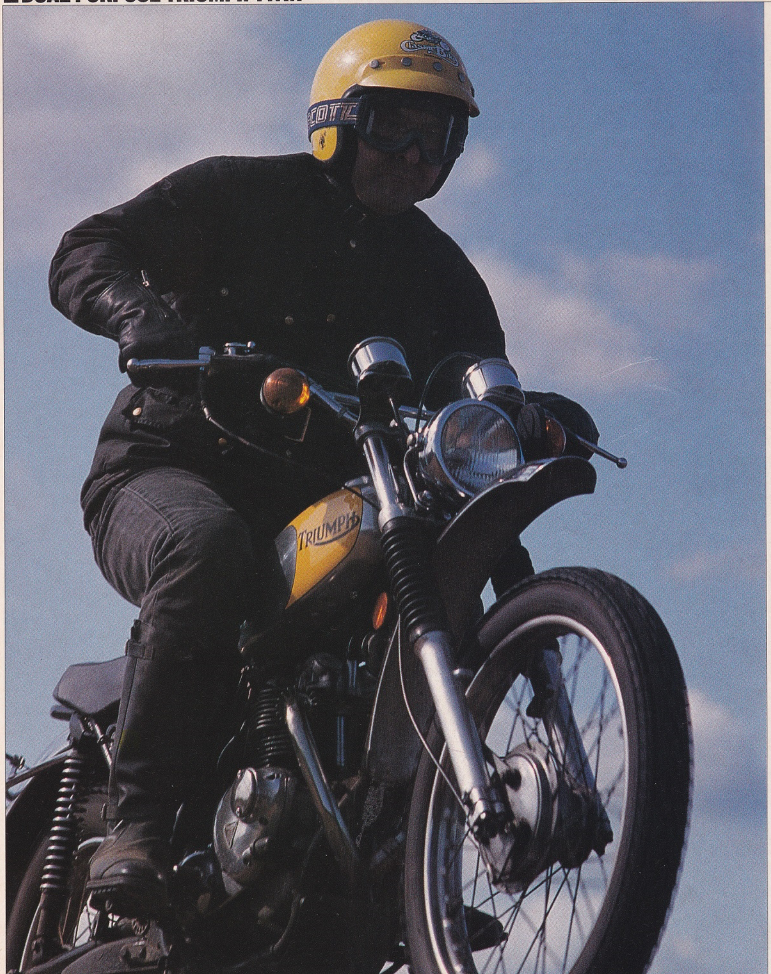
A horrible moment when I realised that I'd lost control of the the front end, and that my boot soles were on top of the fuel tank, proved the point. Triumph's 500cc TR5T Trophy Trail is definitely a mixed-role road and trail machine, not a full-blown enduro mount.

The 1973 Triumph had been sufficiently nimble over hilly and sandy landscape to encourage an act of stupid, and clumsy optimism. In a wide gully, a severe 2ft-high vertical ridge loomed up as I stormed through sand in second gear. An attempt to hoist up the front wheel before hitting the barrier flopped, and the front fork compressed with jarring violence.

Next, the rear suspension reacted, and — bang! — the seat punched skywards, causing my near-handstand on the 'bars. Fortunately full control was soon regained on a long, relatively smooth downhill section following the ridge.

Something similar had happened when riding the TR5T on the road. No, not another hair-raising near-disaster, but a further case of the bike deceiving the rider about its capabilities. Zooming contentedly along country roads, I kept trying to engage a non-existent fifth gear.

The Trophy Trail's 500cc twin cylinder engine — pretty much a late T100 Daytona unit with a single carburettor top-end — churns out gutsy mid-range poke in spades. A natural reaction is to revel in acceleration through the gears. But, you can only snick through to a higher ratio three times ▶



Though not a full-blown enduro machine, the Trophy Trail is still suitable for off-road excursions

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continued

before coming to terms with an uncomfortable buzzing 55mph in top. In theory, you can screw on to about 80mph on the Trophy Trail's low overall gearing, equating to an engine speed of over 7000rpm.

This would be a poor choice of machine for cruising on motorways and wide-open dual carriageways. Nevertheless, it can be extremely enjoyable to ride on tarmac, if you're on twisting, hilly lanes. Or constantly needing to overhaul traffic on slower roads — and who isn't these days?

The TR5T could have been tailor-made for modern sub-55mph urban conditions. It has all the zest and manoevrability needed for quick and tidy overtaking, it is slim enough to slither through narrow gaps, and has masses of cornering clearance. The only snag is that 6in front brake. This drum may be about right for use off-road, where sudden retardation can be lethal, but its lack of bite on smooth dry roads calls for extreme vigilance, especially in traffic.

1973 Triumph Trophy Trail

FOR	Pulls nicely from 3-4500rpm Compact build Certain starting
AGAINST	Low-geared (on-road) Crude suspension, lack of clearance (off road) Weak front brake
Value for money	◆◆◆
Reliability	◆◆◆◆
Parts back-up	◆◆

What's it worth? £1750-£2750

Otherwise, handling on tarmac is positive and safe — the test machine's roadholding was improved radically by jacking up the Avon Mudplugger trials tyres from low pressures more suitable for off-road riding. The 1970s Avons should really have been pensioned off by now.

On the rough, that mid-range grunt — strongest from 3500-4000rpm — gives confidence in attacking steep hills and loose surfaces. And considering the Trophy Trail's street legality, it feels reasonably light over rough going. Claimed kerb weight is 345lb. On grass, gravel, loose sand and other unpredictable surfaces the Trophy Trail steered true, even when the front wheel was sliding. The 27-degree fork rake doesn't make for quick steering, so if you get into trouble on sand, the front end doesn't 'tuck-in'.

The TR5T's front fork looks the part, with yokes and sliders in light alloy. Dust-excluding gaiters have been — wisely — added by a previous owner. The claimed 6.75in of suspension travel is as much as is available to the average pre-65 motocrosser. But, particularly in view of the hard and bouncy low-slung Girling-damped rear end, it is not advisable to take a chance with any unexplored holes or bumps. You could well go over the 'bars.

Although the Trophy Trail benefits from having a frame almost identical to that of BSA's single cylinder motocross machines of the period, it is not in the same off-road league as a more specialised Cheney, Cotton or Rickman-framed Triumph.

The test machine, lent by patient owner Brian Relph, has a 30mm Amal Concentric Mk I carburettor, with a choke size 2mm bigger than the instrument originally listed for the TR5T. This may have contributed to the sensation of a surprisingly tangible power band. Below 2000rpm, the engine felt lumpy. Richness was suspected, and fine tuning will probably restore the trials-type plonk 1970s testers referred to.

The Triumph stalled as soon as it was dropped in deep sand, and during an unplanned sideways-skidding halt. Restarting was always dead easy, however, and that's a real virtue in an off-roader.

Despite many different demands made of the power unit during a long, warm day, the Trophy Trail never hinted at anything other than utter reliability.

A common failing with the gearboxes on earlier unit construction T100s is a tendency to jump out of third under hard acceleration, but nothing like that was experienced with this clean-changing box. Rapid downward changes, accompanied by some clattering of the chain, were sometimes necessary to lose speed in a hurry.

PHOTOGRAPHY JACK BURNICLE

Equipment

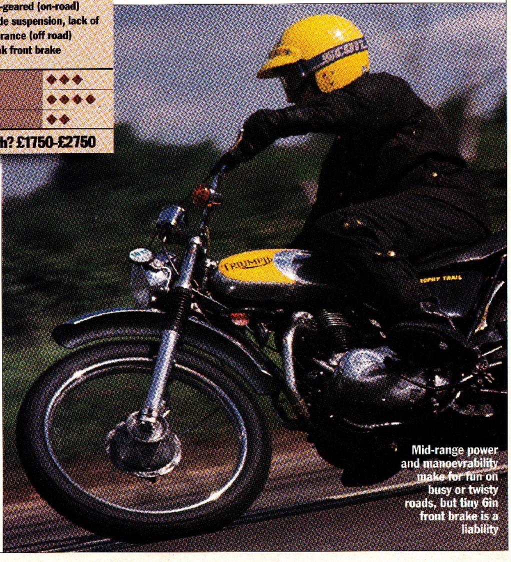
THE TROPHY TRAIL owed its existence to BSA-Triumph's research and development department based at Umberslade Hall.

The essential idea was to mate up Triumph's single carburettor T100 engine with BSA's motocross-bred duplex loop oil-bearing frame. This wasn't done literally: according to Meriden historian Harry Woolridge, a slightly modified copy of the BSA chassis was made especially for the TR5T at the Triumph plant. Some very minor engine changes were involved: the inner cylinder head holding-down bolts were altered from plain through-bolts to sleeve-bolts for ease of assembly.

The frame's swinging arm layout shows its BSA motocross breeding. The rear wheel spindle is held rigidly in the fork's ends, and drive chain adjustment is carried out by moving the swinging arm spindle eccentrically. Snail-cam adjusters on each side guarantee even adjustment.

The rear wheel is not quickly detachable, and to take the front wheel out, there are four nuts to be undone at the foot of each slider, before you get to the spindle.

The 490cc unit-construction engine ▶



Mid-range power and manoevrability make for fun on busy or twisty roads, but tiny 6in front brake is a liability

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continued

enjoys all the benefits of Meriden's ultimate-specification 500s, except the dubious one of twin carburettors. The crankshaft runs in a roller main bearing on the drive side and a ball-race on the timing side, where earlier C-range unit twins had only a plain bush.

The oil filler plug just behind the steering head incorporates a dipstick. The frame tubing holds four pints: not a lot of oil for a hard-worked engine with no cooler. However, even if the twin did get hot on test, it showed no side-effects.

Clearly not designed to please the eye, the exhaust system is nevertheless ingenious. A two-into-one arrangement feeds into an unusual silencer box tucked close to the chassis. The box is an efficient noise-damper and its spark-arresting properties met approval from US forestry authorites. The down-pipes are prevented from popping out of the cylinder head's push-fit ports by tension springs, hooked into lugs on the pipes and holes in the engine plates. Our test machine has a non-standard slashed-end tailpipe.

Coils for the alternator-fed coil ignition system are stowed on a mounting plate in the frame's enclosed central section, fairly well shielded from water. Above them are the 12 volt battery, an air filter with a changeable paper element, and a small tool compartment. Access is gained by releasing screws on the side-panels. The ignition switch is built into the right-side panel, but is wired so that the panel can be pulled clear without disconnecting. Both the ignition points and the carburettor are likely to suffer in watery conditions.

Six days make-over

TWELVE Triumph twins were prepared especially for the 1973 International Six Days Trial, held in the Berkshires area of Massachusetts, in the USA. The batch of TR5T-based bikes of 490 and 504cc — for under- and over-500cc categories — was split between American riders and British teamsters.

They were readied at the Triumph Corporations headquarters at Duarte, Los Angeles. The man in charge of the project, Bob Tryon, had no ISDT -preparation experience, but he studied photos of successful models, and set about incorporating as many of their features on the TR5Ts as he could.

Gold medals won by riders aboard the Triumphs proved that the Trophy Trail was capable of being competitive off-road, but Tryon's work incorporated various deviations from standard trim. These included:

- Spanish-made Betor front fork
- BSA A10 QD rear wheel hub
- Battery-less ignition with back-up coil, capacitor, and zener diode
- Modified front brake backplate (for improved water-proofing)
- Raised and tucked-in exhaust, with conventional silencer
- Moulded side-panels replaced with waterproof fabric
- Plastic mudguards

The 1973 ISDT Triumph ridden by Malcolm Rathmell is in the National Motorcycle Museum.

The comfortable seat is just long enough to carry an occasional passenger, for whom swinging-arm mounted footrests are provided. At 32in, the seat is not set particularly high for an off-roader, and it looks as though it has been mounted as near the ground as possible: the whole back-end of the Trophy Trail looks strangely squat. The broad rear mudguard and bulky rear lamp unit contrasts with the more stylish front end, where the front fender is set well off the 21in tyre, in motocross fashion.

The Lucas 5¾in headlamp is sensibly rubber-mounted, on brackets formed from steel wire, but chrome-plated mounts for the speedometer and rev-counter (early TR5Ts had black instrument surrounds) look more decorative than functional.

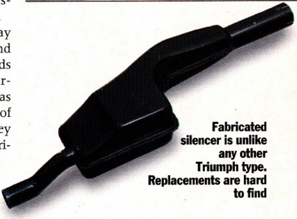
The front pair of chromed plastic direction indicators are secured to the braced handlebars by what look like cheap bicycle bell clamps. Reassuring for road safety, the blinkers would be the first bits to disappear if serious trail use was envisaged.

The propstand is easy to use. You may have noticed what look like centre stand lugs on the frame. Although mainstands were made and listed, they were apparently never fitted to the Trophy Trail as standard. The lugs, which steal an inch of clearance, did have another function: they anchored machines for passage along Meriden's assembly track.

South Londoner Brian Relph bought his Trophy Trail is close-to-standard trim, although the original horn, is presently replaced by a smaller type, and the tank logos may be slightly too big.

Whilst most spares for normal maintenance are plentiful, major parts specific to the Trophy Trail, such as the seat, alloy fuel tank, mudguards and air filter box are becoming rare.

490cc T100 engine sits in an oil-bearing frame based on BSA's motocross chassis. Fork yokes are alloy, but mudguards and control levers are steel



Fabricated silencer is unlike any other Triumph type. Replacements are hard to find

History

AT THE START of the 1970s, a new generation of dual-purpose machines led by Yamaha's DT two-stroke singles created a monster trail bike boom in the States. The traditional large capacity British street scrambler was suddenly outmoded.

Installing the lively 490cc T100 twin in an adaption of BSA's lightweight motocross in-frame chassis was Triumph's response. The cross-breeding had precedents.

John Giles, Triumph's greatest-ever factory scrambler made an unauthorised but highly successful, temporary switch to a BSA Victor frame for his 500 unit twin in the mid-sixties. Also, Californian Danny Macias, of the BSA-Triumph race team pre-dated the TR5T by installing a Triumph T100 engine in a BSA B50MX chassis to make his own off-road fun-bike.

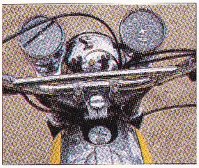
The official T100/B50 hybrid was launched in California in September 1972. The Trophy Trail may not have gained many converts from Honda or Yamaha, but it appealed to Triumph enthusiasts who sought an up-to-the-minute version of their beloved make. TR5Ts were sold in the US in 1973 and 1974. Earlier machines have yellow-painted tank panels, and later examples have red flashes.

Although it was originally destined for export only, Triumph announced late in 1972 that the model would go on sale in Britain. Interestingly, *Motor Cycle's*

Specifications

1973 Triumph TR5T Trophy Trail	
ENGINE	
Type	ohv parallel twin
Bore x stroke	69 x 65.5mm
Capacity	490cc
Compression ratio	9:1
Carburation	30mm (28mm original) Amal Concentric MkI
Output	30bhp @ 7500rpm
Electrical	alternator, 12v battery, coil ignition
TRANSMISSION	
Clutch	multi-plate, wet
Gearbox	4-speed
Primary drive	duplex chain
CYCLE PARTS	
Frame	tubular duplex, oil bearing
Suspension	(front): telescopic fork (rear): swinging arm with twin Girling units
Tyres	(front): 3.00 x 21in Avon Mudplugger (rear): 4.00 x 18in Avon Mudplugger
Brakes	(front): 6in (152mm) sls drum (rear): 7in (178mm) sls drum
Wheelbase	54.5in (1384mm)
Seat height	32in (830mm)
Ground clearance	7in (178mm)
Kerb weight	335lb (152kg)
Fuel capacity	3.25gal (14.8 litres)
Oil capacity	0.5gal (2.27 litres)
PERFORMANCE	
Top speed	80mph (est)
Fuel consumption	60mpg

Springs help hold siamesed exhaust system's pipes in head


Oil filler cap is ahead of fuel tank, front fork yokes are light alloy

Nice trail touch: slim brake pedal won't snag

favourable post-launch test called the bike the Adventurer despite its Trophy Trail decals: the alternative name eventually appeared in the form of side-panel badges.

The Trophy TR5 name dated back to Triumph's 500cc on-off-roader launched in 1948. With an all-alloy engine, and short-wheelbase frame, the first Trophy was based on the factory's competition machines, including those in the all-conquering British 1948 ISDT Trophy Team.

Unit-construction engines were adopted for all Triumph's 350 and 500cc twins at the end of the 1950s, and the Trophy name was applied mainly to single-carburettor 650s. But 500s with high-level exhausts and small headlamps stayed around through the 1960s, to satisfy the US market's need for street-scramblers.

The more purposeful Trophy Trail could have been made earlier. But even if it had, development would have been limited. The BSA-Triumph group was in big trouble, and Meriden closed in 1973. When the workers co-operative resumed production, 500cc models were dispensed with.

Conclusion

ANY machine intended for off-road use whilst remaining street-legal is bound to be a compromise. The low overall gearing that's so welcome on the rough gets tiresome on smooth clear roads. And serious trail riders don't want easily-breakable protusions like indicators.

In the case of the Trophy Trail the dilemma is partly solved by the fact that you can buy more capable off-roaders. Super-nimble Japanese machines apart, there are other Triumph-powered options.

If you're set on green laning a TR5T, you will probably dump the direction indicators, fit plastic mudguards, longer rear shocks, and possibly an alternative front fork — and spoil its classic style.

But you can make the Trophy Trail a better roadster without disturbing its looks. A 47-tooth BSA-Triumph sprocket can be put on the rear hub in place of the 53T standard cog. The 18-tooth gearbox sprocket can be readily replaced by a 20T, or an even larger sprocket can be juggled in if you're willing to open up the gearbox to disturb the mainshaft.

An 8in conical hub front brake from an early 1970s BSA or Triumph won't look badly out of place, and lowering the front mudguard will protect the rider better against water thrown up from wet roads.

Like so many trail bikes made since, Triumph's Trophy Trail is at its best on solid tarmac. If you want an all-British enduro machine, look elsewhere